

Advanced Virtual Energy Simulation Training And Research

**AVESTAR™**




Developed by the  
**National Energy Technology Laboratory**

in collaboration with  
**NETL-Regional University Alliance**  
**WVU National Research Center for Coal and Energy**  
**Fossil Consulting Services, Inc.**



# AVESTAR™



The AVESTAR™ Center provides a state-of-the-art, highly realistic, dynamic simulator for a coal-fired power plant using Integrated Gasification Combined Cycle (IGCC) technology with CO<sub>2</sub> capture. The system is based on Invensys' DYNSIM® software platform and offers customizable training scenario options.

Targeted to energy and process, engineering and construction, and technology supply industries, the AVESTAR™ Center aims to develop a workforce well-prepared to operate, control, and manage next-generation power plants with carbon capture. The AVESTAR™ Center also promotes NETL's outreach mission by offering hands-on simulator training and education to researchers and university students.

## Coming Soon:

Immersive Training System which offers an interactive 3-D experience of the IGCC system using Invensys' EYESIM™ software to link the control room to a virtual plant, providing a more realistic and complete training environment.





## **The AVESTAR™ Team works with clients to:**

- Analyze needs
- Identify goals
- Customize training plans

## **Opportunities include:**

- Unique training facilities
- Access to internationally-recognized experts
- Research collaboration
- Licensing of software

## **Courses include:**

- IGCC Orientation for Engineers & Managers
- Introduction to IGCC Operations
- IGCC Operations for Advanced Operators
- IGCC Combined Cycle Operation
- IGCC Gasification Process Operations



# AVESTAR™

## Visualize the Future of Energy!

### Locations:

#### National Energy Technology Laboratory (NETL)

3610 Collins Ferry Road  
Morgantown, WV 26505

#### National Research Center for Coal & Energy (NRCCE)

West Virginia University  
385 Evansdale Drive  
Morgantown, WV 26506



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U.S. DEPARTMENT OF  
**ENERGY**